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clear honey is desired, it may be strained through silk. The native wild combs contain no wax. The larvae are sometimes eaten, either toasted in their cells or fried. The latter method of preparation involves picking the larvae out of the cells. Yet another method is to toast the larvae with onion, chile, and salt. The latter method is said to be especially tasty, but probably only *panaleros* ever use any of these methods very often.[5]

The larvae of another insect, the *traspanal* (*jicotera* in La Cañada), are also collected and eaten occasionally. This insect resembles the native bee but is a little larger and makes its nest in the ground to depths of 1 meter (3 ft.) or more. No other animal food is collected and the use of the eggs of wild birds was denied with every evidence of distaste.

USE OF MINERALS

Stone, volcanic cinders, and clay are the three mineral resources utilized in Cherán. Tuffs and lavas are employed for house building, foundations, and fences. The materials occur either in the town itself or in barrancas within a few hundred yards of the town. Volcanic cinders are also quarried out of the sides of barrancas, often within the town, and are employed to spread over slippery places on trails, streets, and yards. The supply of materials far exceeds demand, and the public domain affords all needed supplies.

Most of the rock used in Cherán comes from a quarry on the west face of the hill of Santa Karákua (also called Santiákujákua) within the village. Most of the rock is prised out of the upper face of the quarry in large pieces, which usually are broken up in the fall to the foot of the quarry. The broken rock is then placed in piles, which later comers will not molest. Smaller rocks and spalls are abundant and anyone may help himself to these. The rocks are usually packed by tying them on burros with ropes, while small pieces may be placed in nets or in pack boxes.

Clay is somewhat more scarce. It is used only for tilemaking and brickmaking, as no one in Cherán makes pottery. A sufficient supply of clay for all present needs is dug out

[5] At Sopoco in La Cañada, Rendón was told that the larvae are sometimes eaten raw.

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317 either from the sides of public roads or from fields, with the permission of the owner. It is
● [492] dug with pick and shovel, put in bags, and taken into town on muleback.

333 Adobes (adóbi) and adobe mortar are made from any convenient fine earth mixed with manure. In some towns dry pine needles (*"huinomo"*)[6] or wheat or barley straw is used. The mud (adímu) for adobes is mixed in a depression in the ground. Dry earth is first mixed with manure and water is added, in the proportion of 10 loads (*carretilladas*) of earth, half a sack of manure or straw, and 10 five-gallon tins of water. The mud is then mixed with a spade for about 3 hours.

A wooden frame (*marco* or *adobera*), the size of the brick to be made, is now placed on carefully leveled ground. Mud is placed in the frame and pressed down well with the hands to insure complete filling of the space. The frame is now lifted off and washed in preparation for making the next adobe. The adobes are allowed to dry for 8 days, first in the original position and then on edge.

The usual size of adobes is 60 by 40 by 10 cm., or 2½ spans long. Cherán makes this size and also a brick 3 spans in length.

WATER SUPPLY

312 Cherán has a better water supply than most Tarascan towns, but it is still far from adequate. The larger of the barrancas through town often has flowing water, but this is used only for watering animals and washing clothes, as it is not considered pure enough to drink. At one spot, however, there are a number of small springs in the walls of the barranca. These have been improved by building cement tanks to accumulate the rather small flow, and people from the *barrio* of Parícutin and some other nearby residents obtain their water from the springs.

About 10 years ago an aqueduct was built to large springs near the base of the mountain, El Pilón, a distance of 15 km. (9 mi.). A 2-inch pipe line was laid, but the pipe reached only to the edge of town. From the end of the pipe the water is carried to the center of town by an arrangement of hand-hewn wooden

[104]

[6] Words regarded in Cherán as Spanish but which either do not appear in dictionaries or have special local meanings are placed in quotation marks.

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THE FARMING CYCLE

221 241 A clearer picture of the agricultural cycle may be given by a monthly summary.

January: Little to do; second plowing of maize lands may begin.

February: Second plowing of maize lands.

March: Maize planting begins.

April: Maize planting; first cultivation of early maize at end of month; planting of vegetables and maize in *solares*.

May: Wheat harvest; second cultivation of maize.

June: Second cultivation of maize; some wheat threshing (continued in dry weather throughout rest of year).

July: Fairly free month; weeding of maize begins; second cultivation of maize continues.

August: Plowing for wheat.

September: Planting wheat; cutting maize fodder.

October: Plowing for maize; rains usually end; cutting maize fodder; wheat threshing nearly finished.

November: Maize harvest (if lower lands planted); plowing.

December: Maize harvest on higher lands; plowing.

SOIL PREPARATION

241 Land is prepared for field and garden crops (except for small kitchen gardens of cabbage and herbs) by plowing one or more times (pl. 4, upper left). The plow used is usually a wooden type (fig. 3). The Government has given some 30 steel plows to the *municipio*, which lends them to farmers; although these are all in use, they care for only a small part of the plowing.

231 241 492 Regardless of the type of plow, it is almost always drawn by oxen. Mules, and perhaps horses, undoubtedly are used sometimes, but not as frequently as in adjoining Aranza; in the entire season of 1940–41 no single instance was observed on Cherán lands. If the wooden plow is used, the long plow beam is attached to the ox yoke directly. Steel plows are attached to the ox yoke by a chain. An ox goad of wood, often with a chisellike metal butt (for sticking in the ground), is employed.

[427] A great many farmers own oxen; if they do not, they must rent them at 75 centavos to 1 peso a day, depending on the demand. If drivers are hired, 50 centavos a day is usual. On the other hand, if a man has rented his land on shares, he must make sure his tenants plow at the right time. Usually land is plowed twice before planting, but the depth rarely exceeds 6 inches.

243 only a few watchers are necessary. A pine
221 tree some 20 feet high is trimmed and set
674 firmly in the ground. The watchers climb this and spend hours standing uncomfortably in the crotches left by trimming the branches. Often several families may cooperate in watching, or several landowners may hire watchers, called *veladores*.

243 When the ears are well formed, but while
246 stalks and leaves are still green, fodder ("*rastrojo*") is cut. All stalks without ears, and the ear-bearing stalks above the ears, are cut, dried, carried to the house, and stored in sheds. This forms the principal fodder for animals. The stalks remaining in the field are not cut after the harvest, but animals are allowed to graze the harvested fields.

243 The main work of harvesting is done by men.
[462] Women bring food to the men, and they also glean, assisted by children. At harvest each man takes two rows at a time. The ears are picked, husked, and thrown in a round cane-
[482] splint burden basket (ŭndis) carried on the
[285] back with the aid of a tumpline. Ears which miss the basket belong to the gleaners, who also take the nubbins. When the basket is filled, the corn is piled at convenient spots.

243 The harvest is the busiest time of year.
464 Except for a few specialists, the sick, and the
466 infirm, everyone works, either on his own harvest or as a laborer for someone else. Labor also comes from other towns. Wages are 40 to 50 centavos a day, plus the right to glean. Women and children follow the men of their own household and close supervision is necessary in order to prevent too many ears from being dropped or overlooked. The workday is about 7 hours. The larger landowners have tried unsuccessfully to eliminate gleaning by raising wages to 1 peso a day. Men refused to work without gleaning rights, despite the opinion of most objective observers that the maize secured from gleaning had less value than the additional wages. The landowners would have saved through eliminating supervisors. When the harvest is over, some farmers treat all their help to a few drinks of *aguardiente* (čaránda).

243 Most of the harvest is carried to town and
492 the storehouses on burros. Nets are used to hold the ears. Sometimes other animals are
[493] used, and for some fields employment of two-wheeled oxcarts is possible, although they are rarely used.

243 wheeled oxcarts is possible, although they are
492 rarely used. Burros usually have to be rented
[427] or borrowed; in the latter case, a gift of maize or money equal to the rent is usually made. Fifty centavos a day is the usual pay for burros, which adds considerably to the expense of bringing in the harvest from distant fields. Often pay is in maize and is subject to some bargaining.

243 The time of the harvest varies in different
632 places. If the "plain" west of town is planted, the main harvest is in November, but if the "plain" southeast of town is planted, the harvest is in December. In either case, the town council, in consultation with the principal landowners, sets the dates for harvests. Where lands adjoin those of neighboring towns, usually both towns begin the same day. Eight days after the date set, anyone may turn animals into the fields. Persons who have not completed harvesting or carrying in their harvest may have difficulty protecting it from animals.

243 As the harvest is a time of joint work, even
527 though not communal in character, it also is a
692 rather festive and social occasion. Moreover,
273 many workmen have more money than at any other time. To protect them from temptations, keep them sober while working, and avoid distractions, the sale of fruit or liquor is prohibited outside the edge of town. Actually, the "edge of town" becomes somewhat elastic, and vendors may set up stands as much as half a kilometer from town.

243 In 1940 the following schedule of harvests was posted:

December 5. Huanaschucun (sloping lands at the foot of the Cerro de la Virgen, northwest of town).
December 9. Eastern part of the "plain" of Sharicho and Rincon de Paso.
December 16. Western part of Sharicho.
December 19. Plain of Arantepacua.

No rules were posted for smaller isolated areas and fields which were fenced. The parts of Sharicho and other areas close to the Nahuatzen boundary were harvested beginning November 26 in order to prevent conflicts over animals crossing the boundary.

251 White maize and yellow maize are stored un-
243 shelled in the lofts of "*trojes*." Little effort is taken to protect maize from rats and squirrels

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234 The calf is then tied nearby while the cow is milked; it is then permitted to suckle.

The cow is milked only once a day and only from June to January or February while pastures are good. Ordinarily, the cows are kept and milked in the fields. If only one or two cows are milked, they may be pastured close to the village and driven into the house yard for milking. In this case, if the owner has feed, the cow may be milked after February.

231 492 Oxen, and sometimes bulls, are used extensively for plowing. In a very few cases they also draw two-wheeled carts to bring in the harvest, although most of this is done by pack animals. Oxen are broken to the yoke after they are fully grown, but fairly young steers are sometimes yoked together in the pastures in order to accustom them to traveling together.

231 Animals are not bred or raised specially for beef. Cows, bulls, and steers are killed, the main consideration being the fatness of the animal. A considerable number of the animals slaughtered are oxen considered to have outlived their usefulness as draft animals. Although specially fattened for slaughter, the beef is as tough as might be expected. Calves or young animals are never slaughtered. Animals dying of disease are not eaten in Cherán [184] but are in other towns. The hides of slaughtered cattle are valued according to prices in [435] adjacent Mexican markets.

Although Cherán raises more than enough cattle for its own use, cattle raising is not regarded as a very satisfactory business because of the lack of pasture during the latter part of the dry season. Usually, numbers of animals die of starvation during April and May. This is true of other grazing animals also.

When not in use, cattle are ordinarily pastured in the mountains. They are visited every third day to make sure they have not been stolen and that they are getting water. They are driven down to the farm lands and allowed to graze on the cornstalks or wheat stubble during the winter. This practice not only aids the animals over part of the dry season with its scanty pasturage, but is recognized as a means of fertilizing the soil.

[232] Little care is used in breeding, and new bulls are never brought in from outside. If a man owning a cow has no bull, he simply drives the

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236 Although mutton is eaten to some extent, sheep are raised primarily for wool. Sheep
[262] are sheared twice a year, in late fall and early summer. A sheep yields about 1 pound of wool
[435] in two shearings, which sells at from $1.00 to $1.25 (all monetary values are in Mexican currency). Black wool brings more than white (as it is all used locally for serape weaving).

233 *Goats.*—Only a few goats are raised. Normally they are herded with the sheep and are
[234] treated like them. In rare instances the goats are milked, and the milk is made into cheese.
[438] The most important use of goats is to sell them
[262] for food, usually outside the town, as goat meat is rarely eaten in Cherán. Goatskins are sold uncured with the hair.

231 *Horses.*—Although some horses are bred in Cherán and some care is exercised in breeding, it is said the animals deteriorate because of the cold climate. Consequently, most horses are imported, but they also deteriorate rapidly. More important than the cold, undoubtedly, is the fact that no one in Cherán understands the care of horses. They are badly fed and receive little protection from the weather. Stallions are castrated.

In any case, horses are rare in Cherán and
[492] are little used except as riding animals, especially by those with numerous cattle or pack animals. Riding and pack gear are the same
[184] as those of the Mestizos. Although in other
[241] Tarascan towns horses are used in plowing, this was denied in Cherán. A rather poor
[435] horse costs about 70 pesos. Most horses be-
[556] long to well-to-do men and primarily are indicators of social position. Attitudes toward owning a horse are a weak reflection of those of the vanishing Mexican *caballero*. Women almost never ride.

Horses are fed maize, oats, maize stalks, and
[232] wheat or oat straw. Few people have any knowledge of treating illnesses of horses.
[422] Ownership is indicated by branding, and horses
[552] are given names similar to those used by
[262] Mestizos. Horse meat is not eaten, but horse
[281] hides are valued for tanning.

Mules.—Mules are even rarer than horses and have a higher value. Almost all are im-
[492] ported. They are used mostly as pack animals, but occasionally they are ridden or used with the plow.

231 the plow. Care and practices otherwise are the same as for horses.

231 *Burros.*—"The poor man's mule" is one of the more common animals in Cherán. Often kept 492 in a shed by the house, the burro is employed to bring in firewood (when he may be ridden to the woods), to bring in the harvest, carry goods on trading trips, and perform any other service of burden carrying. Burros may be used as light draft animals in such tasks as dragging brush over wheat fields to cover the seed after sowing. Often rented, especially at harvest time, burros are frequently lent to friends, neighbors, and relatives. Although hard-worked, they are usually better cared for and less abused than among the Mestizos. They are often fed rather than pastured, and saddle sores and other signs of abuse are relatively uncommon.

Burros are bred in the town. Jacks are not [262] castrated. The flesh is never eaten and the [281] hide is regarded as of little value.

231 *Dogs.*—Usually each household has one or perhaps two dogs, but large numbers of starved animals are rare. Ordinarily a dog is fed what the family has, and if a dog is underfed, usually the family is also. Dogs are always named, usually for "pretty things or animals" [552] such as Butterfly, Duke, Tiger, or Rattlesnake. Others are named for their coat color or because the name is liked. No effort is made to control the breeding of dogs.

Dogs are used in hunting, sheepherding, and to guard the house. In the latter capacity, the dogs of the *barrio* of Parícutin are much more aggressive than in the rest of the town. This may be because their masters are generally less friendly or may simply reflect the more rural character of the *barrio.*

Hunting dogs are used to chase deer, squir- [224] rels, rabbits, and other animals after they have been wounded. Apparently no special training is given. Sheep dogs are trained by putting them on a leash with a sheep during the day and tying them near the sheep at night. They are encouraged to bark at the right time and to attack coyotes.

Cats.—Cats are not numerous in Cherán, although they are valued fairly highly because they combat the many rats which steal stored corn. Cats seem well treated and are some-

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Women are
441 believed to be more resistant to the illnesses of
439 *tierra caliente*, and tales are told of women who
[827] saved their husbands by nursing them or by bringing them back to the healthful highlands. For this reason, traders rarely go alone, although large parties are rare. The major
[64] disease appears to be malaria. Insects, especially one attacking the feet, are mentioned as a great bother.

[674] Robbers are also a source of danger; however, the most traveled route—that to Guerrero —is said to be entirely safe. Some of the greatest dangers on the route to Coalcomán or Colima seem to have been in Tarascan territory. The village of Capacuaro had a particularly evil reputation at one time.

[492] Goods are ordinarily transported by burros. A poor man may have to carry goods on his back. The *arrieros* never ride except when
[497] seriously ill. An exception is that journeys to
[494] Celaya are made on the train, while nearby trips may sometimes be made by bus since construction of the highway.

The first step in a trading expedition is the assembling of goods for the trip. These may consist of pears from Cherán; apples from Pichataro; wooden products (*"tornillo"*) from Paracho; sweetpotatoes from San Francisco; fine pottery (not cooking ware) from La Cañada, Guadalajara, or Quiroga; oils and spices from Pátzcuaro; dolls, pottery, and other goods from Celaya. Most of the goods carried by Cherán traders, however, are local in origin, i.e., within the Tarascan area. In such cases, trade goods either are assembled by one or more short preliminary purchasing trips or are bought en route. Guadalajara pottery requires a 7- or 8-day trip each way with burros. Celaya goods, as stated, involve a trip by train.

On the return trip various products are brought. From Guerrero come dried fish, dried beef, gourds, gourd containers, coconuts, and cheese, the last being most important. Few data were obtained on the products brought from Coalcomán, as few Cherán traders make this trip, but cheese and dried beef are probably the most important items. However, the one trader to give specific information bought beeswax. Chiles are brought from Colima.

Generally the goods brought back are not sold until Cherán is reached. Then they are

441 Paracho and brings back coconuts and dried
439 meat. He normally travels only a half day.
487 (However, his half day would mean a dawn start and continuing normally until midafternoon.) His stops are as follows: Pichataro, Sirawén, Ario, Las Palmas, La Playa, Cayaco, Guadaloupe, Las Balsas, Corcoles, La Limón, Tepehuaje, Colmeneros, La Unión, Pantla, Puerto Sijuatanejo, San Geronimito, and Petatlán.

441 *Arrieros* probably have superior techniques
[492] for handling burros. *Criolina* is carried for treating saddle sores, and burros are shod "when the burro catches cold in his feet." Dysentery (*"posición"*) is the most frequent cause of loss of burros on trips.

Arrieros also observe special ceremonies. A
[782] candle and prayer are offered to San Antonio before going on a trip, and thanks are rendered on return. The *arrieros* also maintain a *mayordomía* for San Antonio, which is described elsewhere.

In general, knowledge of the economics of the *arrieros'* activities is unsatisfactory. It would be extremely difficult to gain an accurate idea of the amount of goods exchanged by this method or to discover the monetary or other rewards obtained by the *arriero*.

The importance of the *arriero* class un-
178 doubtedly will wane rapidly with the extension of highways and truck trails. Already the importance of the *arriero* in the Coalcomán region has greatly diminished as a result of truck trails opened up in recent years. When a direct connection is made between the highland and the developing truck trail system in the Balsas Basin, the *arriero* probably will rapidly disappear.

TRANSPORTATION

As has been indicated at various points in
492 the preceding pages, the burro is the most common means of transportation still, supplemented occasionally by horses or mules. Poor traders may even make long journeys carrying their goods on their backs. Nevertheless, a revolution in transportation is under way in Cherán.

One alteration in the transportation picture
494 is the truck which picks up bulk goods in Cherán for markets that formerly were closed to these items. As much as 4,000 kilos of wheat has

527 assembled, the young men have to rebuild the
624 bull ring. Anyone not doing his part or pro-
358 viding his materials, as Romero put it, "rests in jail."

The bulls for the bull riding are sought by
527 the mayor or by a member of the *ayuntamiento*.
624 Different persons provide bulls for each of the 3
541 days they are ridden. On the Sunday the fiesta begins, the mayor or one of the councilmen takes a bottle of *charanda* to the house of the person to be invited to provide bulls. If the person accepts the bottle of *charanda*, he is
[492] obligated to provide his bulls for riding (only a few people in town have suitable bulls). The owner of the bulls then invites others to help him bring in the bulls or, if they own bulls, to bring theirs as well. If they accept, he gives them a drink of *charanda*. The same routine is followed for the bulls to be ridden the other 2 days.

Sometimes bulls are brought from another town. If the relations between the towns are
[427] friendly, usually the bulls will be lent, if not, it may be necessary to pay rent for the use of the animals. The rent is paid from the municipal treasury, using some of the money collected from vendors in the plaza.

527 One other obligation exists which should be noted. The one rancheria of Cherán, Cosúmo,
624 provides a *chirimía* band each year (the
[534] chirimía is an oboelike wind instrument). In 1940, the band was said to be from Carapan. The men from the rancheria also act as policemen during the fiesta.

527 The sequence of events leading up to the fiesta and the fiesta itself will now be described. As already indicated, the first preparations began with the naming of the commissioners by the mayor on August 20. Obviously, the actual notifications on this date were preceded by discussion of suitable persons and the preparation of the letters. The commissioners then sought their assistants, began estimating costs, making up the lists of contributors, and collecting money, at the same time making arrangements with fireworks makers, musicians, and candlemakers. The commissioners for the moros began hunting for dancers. Meanwhile, every Sunday, the young men practiced bull riding on the tame bulls kept near town. They also began to bring in logs

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PLOWING, DITCHES TO PROTECT FIELDS, LOG HEWING, AND CHERÁN PLAZA DURING FIESTA.

Upper (left): Plowing on the plain. Augustín, at the plow, wears felt hat, shirt, trousers, belt, and shoes; workman at left, less acculturated, wears straw hat, sandals, and mechanic's overalls. *Upper (right):* Squaring a log with an ax before sawing it into planks. *Lower (left):* A hill-slope field, with new ditch (center) and overgrown bank surmounted with thorny brush (foreground) to protect it from animals. Agaves are planted on right of ditch. *Lower (right):* Portion of Cherán plaza during the fiesta of the patron saint.

[End Plate 4]

339 In some towns, dried pine needles ("*huinomo*"), wheat, or oat straw are used in place of manure.
[192] In the Sierra, adobes are called adóbi; in Ihuatzio, on Lake Pátzcuaro, iaufúkata.

STONE

316 Masonry is made of assorted-sized rocks brought
333 from a quarry in the west side of the cinder cone on the northwest edge of town. The stone is a porous soft reddish lava, easily broken or dressed roughly with a hammer. It is carried from the
[497] quarry on burros. The rocks are used for all types of masonry walls. Usually large sizes are employed near the bottom and to make the external faces of the wall; smaller stones are used to fill up the spaces, and usually all external surfaces are filled with small stone spalls set in the mud mortar.

316 Large stones used for foundations are a hard gray lava from the arroyo north of town or from the slopes of a cinder cone northeast of town.
[324] The same rock is employed for finished pieces of

[Continued on p. 106]

TYPES OF STRUCTURES

WOODEN STRUCTURES

343 Three main kinds of wooden structures are built. These are the "*troje*," or house (trója; in Angahuan, ɬarímba), really a storehouse in use, the kitchen (kosína), and sheds used for storing fodder or sheltering animals. Normally, a mas-
[335] ter carpenter is employed; he usually works for an agreed price and hires a helper.

The "*troje*" is a rectangular structure, nearly square, consisting of one room with a loft over it (fig. 3; pl. 2, upper). The door is always in one of the long walls and there is usually an overhang of the roof, supported on pillars, forming a veranda on this side. Usually the flooring of the first floor is extended to form a floor for the veranda (fig. 3; pl. 4, lower, left).

343 The "*troje*," or house, is elevated on large stones
335 (or stone pillars in some towns), usually 9 in number, one at each corner, one in the middle of each side, and one at the center of the floor. Upon the stones go four interlocking foundation beams, "*polines*" [3] (pɨ́ɛkua), and a crosspiece destined to support the middle of the floor, the "*atravesaño de*

[Continued bottom page 106]

[3] Also "*parines*," because they are usually made of heartwood (*ɨsíni*).

243 is often retarded until the following December or January.

246 Fodder, consisting of that part of the maize
251 plant above the ears, is cut in September, when the plant is still green and the ears well formed. In the Sierra, fodder is often stored on platforms constructed in trees. Normally it is taken to the village and placed in sheds or on log platforms in the house lot (pl. 5).

243 Since the late fall maize harvest of Cherán, described by Beals (1946, pp. 24–25), is typical of most of modern Tarasca, no attempt will be made to repeat the data here. In only one area—the
[493] Zacapu Basin—are four-wheeled wagons (*guallines* made of the frame and wheels of abandoned autos) used to haul maize from the fields to the village. In all other areas burros haul the ears
[492] in sacks (*costales*) or nets. Ears of maize are
251 stored in the lofts of the main house; shelled corn is never stored. The ekuaru corn that is kept for seed and food is hung by the husks in bunches (*piña*, sandángata) or in rows over poles inside the house or on the veranda.

242 *Crop rotation and fallowing.*—Except in ex-
243 ceptionally fertile lands, field maizé is rarely grown for two consecutive years on the same ground. In the basin plains of the Sierra, corn is often planted without fallow in spots refreshed by annual deposits of alluvium, as at the base of alluvial fans and in sink areas in the center of basins. The soils of the recently drained lacustrine plain of Zacapu are so rich that they support annual maize crops without rotation or application of fertilizer. Generally in the Sierra, maize fields in the basin plains and lower slopes are fallowed for 10 or 12 months every other year. In such fields only maize is planted. Usually during a given year, half of the plains land belonging to a village and a portion of the slopes are fallowed, the rest being planted; when the village possesses more than one basin plain, cultivation and fallow are alternated from one to the other. Ordinarily in the *desmontes* and *jollas* wheat or barley are rotated with maize (one year wheat, one year maize, one year fallow). In the temporal lands surrounding the Sierra customarily two crops per year, one of maize, the other of wheat or barley, are obtained from a given piece of ground. The land is then fallowed 8 to 12 months. (Wheat planted in November, harvested following April or May; maize planted in June, harvested in

313 ing is carried on outside the Sierra. Some beams and planks are cut by the people of Zipiajo and Teremendo, who have large tracts of forest on the slopes of El Zirate, and some farmers of the Lake area and La Cañada cut small amounts of lumber for home use.

313 423 Beals' discussion (1946, pp. 15–19) of legal cutting rights, lumber products, and lumber tools for Cherán can be applied to most of the present Sierra pueblos; therefore, only a summary will be given here. As mentioned above, all Sierra pueblos possess varying amounts of forest land held as common property. Since the late [656] 1930's the Federal Government has attempted to control exploitation by placing all large forest areas under national domain, by encouraging the organization of local lumbering cooperatives, and by periodically inspecting lumbering activities. [651] In most pueblos the Federal tax on lumber products is passed on to the individual woodsmen, who pay the town council a given amount for cutting rights. In other towns lumber coopera- [474] tives have been formed to pay the tax, each member contributing dues and having sole cutting rights in the village forest lands.

Although much lumber is for local use (house [439] construction, fences, acqueducts, watering troughs, shakes, etc.), most is cut for the outside market. Raw logs, beams (*vigas*), planks (*vigetas*, *tablas*), and railroad ties of pine and fir are cut and pre- [493] pared for lumber contractors, whose heavy trucks visit the larger villages during the dry season to [492] haul the products to the nearest railhead. Wood- cutters of the remote pueblos drag beams and planks to market with the aid of burros and mules. [497] Los Reyes, Tingüindín, Tangamandapio, and Zamora handle the forest products from the western part of the Sierra, while Uruapan, Zacapu, Ajuno Station, and Pátzcuaro serve as lumber points for the eastern section. Formerly a significant forest industry, shake making (performed by skilled specialists) is slowly declining because of the increasing use of tile roofing.[139] Turpentine 314 is no longer distilled locally. (See Beals, 1946, p. 18, for illustration of Tarascan still.) Rather, the resin (*resina*) is gathered in 5-gallon tins and taken to the village, where they are periodically

[139] Although in some pueblos (Pamatácuaro and Arantas, Angahuan, Capacuaro) shakes are still made for export to Uruapan, most are used locally. During colonial times and even in the last century large quantities of shakes were shipped from the Sierra to the northern mines, where they were the principal roofing material.

443 Tarecuato, and medicinal herbs of the Sierra to
439 Colima, most parts of Jalisco, the *tierra caliente* of Michoacán and Guerrero. Tropical fruits make up most of the return load. A few professional carriers haul pottery from Santa Fé to Quiroga and, at times, to Morelia. *Huacaleros* from other towns have practically disappeared.

443 Although they do not use the large *huacal*,
438 many women of the Sierra devote most of their time to carrying various products to the surrounding mestizo markets. For instance, the women of the Pamatácuaro *ranchos* (Uringuitiro, Tierra Blanca, etc.) carry *ocote* splinters, wooden spoons, and tamales to Zamora, Chilchota, Patamban, and the Lake area.[170] Again, some women of Corupo collect eggs and chickens from surrounding towns and take them to the Sunday market at Uruapan.[171]

492 The *arrieros*, or the "mule-skinners," in spite
443 of inroads of motor transportation, still account for a large part of the interregional trade in Michoacán. Mule and burro transport came into
[177] use on a large scale in New Spain after the forced services of the *tamemes* were restricted in the last half of the 16th century (Spain. Law, Statutes, etc., Lib. VI, tit. 12, ley 6–10). Indians, however, were slow to adopt animal transport. Even in the latter part of the 18th century the majority of the muleteers operating in Michoacán were Spaniards or mestizos, who hired Indians as helpers. By 1789 some Tarascans owned mule or burro trains in Cherán, Urapicho, Angahuan, Charapan, and Pomacuarán (AGN Historia, vol.
[439] 73). Even today the greater part of the *arrieros* operating in the Tarascan area are mestizos with headquarters in some of the northern towns.

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[170] During such trips the women of these ranchos may be gone from their households for 3 or 4 days. In their absence housework is done by the children or the men, who rarely travel.

[171] Such rounds may last a week. The women visit Charapan, Zacan, Zirisio, Pamatácuaro on certain days, returning to Corupo by Friday, and arrive at Uruapan Saturday evening. Eggs are carried in a small crate held on the back with the *ayate*. Six or seven chickens are tied on the top of the box, and, in addition, many women carry one or two fowls in their arms.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[74-b]

443 Like the *huacalero*, the *arriero* in the Tarascan
492 area has functioned chiefly as a commercial inter-
439 mediary between the *tierra caliente* and the *tierra fría*. During the colonial period, however, some mule skinners extended operations into the northern mining districts. Moreover, various mestizo towns in Tarasca became *arriero* centers—strategic points along the main routes where mule trains met, animals were sold and traded, supplies purchased, and merchandise exchanged. Such towns became residences of many muleteers. A series of these centers lies within the *tierra caliente* and includes Apatzingán, Huetamo, and Coyuca. Another series is located within the *tierra templada:* Uruapan, Ario, Tacámbaro. Other centers are found in the *tierra fría:* Cotija, and, formerly, Parangaricutiro and Jiquilpan. Most of these towns still function as *arriero* centers, and although motor transportation is continually replacing the mule and burro, some of them will continue to serve as way stations for fuel and repairs and collecting points for products carried out by trucks.

443 Since the construction of motor roads in many
494 parts of Tarasca, former *arrieros* and *huacaleros* have begun to use public busses and semipublic trucks to transport merchandise. Pottery vendors, for example, stand for hours along the highway, hailing through-trucks to take them and their goods to Guadalajara, Morelia, or Mexico City. Moreover, heavy sugar and *cascalote* trucks now operate from Uruapan, Pátzcuaro, and Los Reyes into the *tierra caliente*.

442 The wholesale buyers represent a modern type of merchant, who with the advent of road construction have begun to penetrate into the Tarascan area. Grain dealers from Morelia, Zamora, and Uruapan now run their trucks into the Sierra towns to buy surplus wheat. Again, many woodworkers in Paracho are on contract to city wholesalers for turned work and guitars, which are collected at intervals in trucks or passenger cars.

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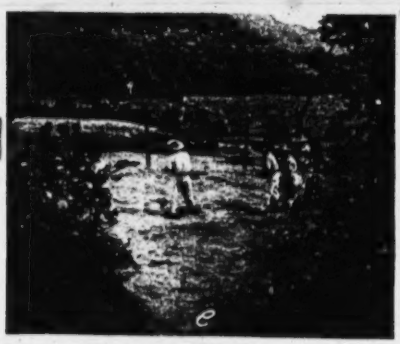

PLATE 6.—Wheat cultivation. *a*, Irrigated wheat fields near Chilcota, La Cañada. *b*, Temporal wheat fields on the northern edge of the Sierra, near Tiríndaro. *c*, Method of hauling wheat bundles to the threshing floor, Apo. *d*, Cutting wheat with the sickle, near Pichátaro. *e*, Threshing wheat with flails, Hda. *f*, Threshing wheat in the ox with hooves, at Cocucho. The carreta (right) is used in many parts of Tarasco to haul wheat bundles and maize fodder.

[End-plate 6]

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PLATE 14.—Markets and transport. a, The Sunday firewood and fish market, Erongaricuaro. The wood vendor at left has already bartered a pile of pinesticks for a few fish in the basket. b, Pottery section of the Sunday market at Uruapan. c, The bread section of the Erongaricuaro market on the plaza. d, A train of burros bringing plantain palm leaves from the sierra caliente to Arío de Rosales. e, Boats from Janitzio landing on the mud flats at Erongaricuaro for the Sunday market. f, Hauling disassembled chairs and tables from Cocupao to the Uruapan market.

[End-plate 14]

11: Boyd H-4, 5 (1953) 1958
[End Plate 2]
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Plate II. Tarascan Houses and Mode of Travel

[176] *Upper*, Tarascan homes, wooden fences are a recent innovation.
[103] *Lower*, Tarascans returning to mountains after selling firewood in
[438] Morelia.